

One killed, 21 injured

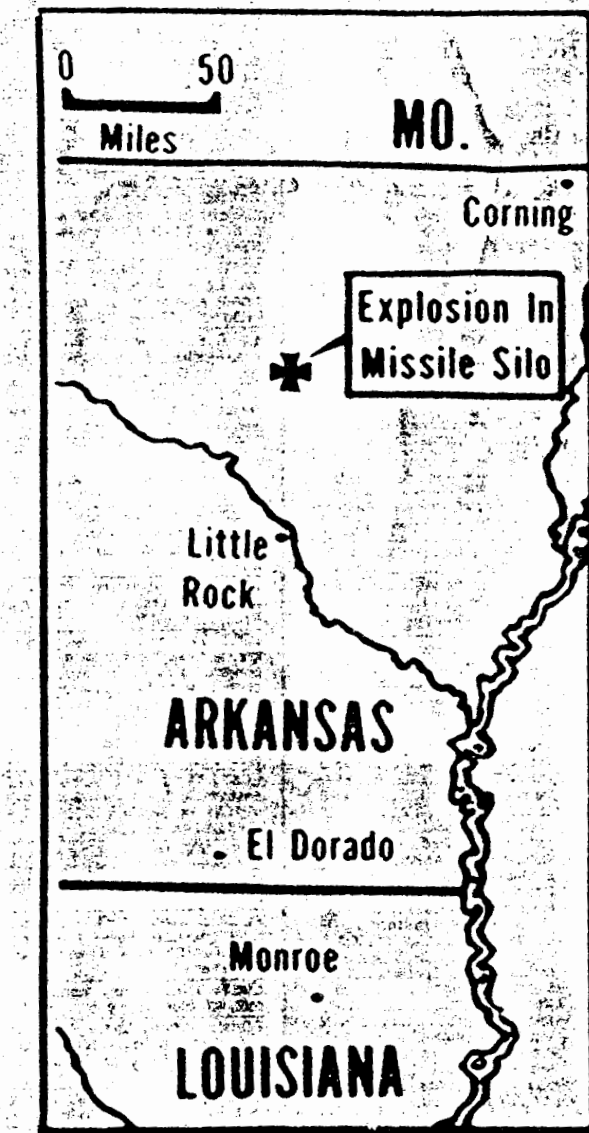
DAMASCUS, Ark. (AP) — An underground Titan II missile silo housing a nuclear warhead exploded "like Roman candles" in rural Arkansas on Friday after a workman dropped a wrench socket that punctured the missile's fuel tank. One worker died and at least 21 others were injured, but Pentagon sources said no damage occurred to the warhead and Air Force officials said no radiation escaped.

"There is absolutely no evidence of any radioactive material in the area," said Hans Mark, secretary of the Air Force. "I can tell you that with absolute assurance."

The Omaha World-Herald, however, reported sources said the 103-foot Titan, the nation's most powerful intercontinental ballistic missile, was destroyed and some damage did occur to the thermonuclear warhead. The newspaper said its source emphasized no radiation leak was detected and there had been no danger the warhead would detonate.

NBC and ABC News said it had learned the warhead was blown out of the silo by the explosion, but both the Pentagon and the Strategic Air Command in Omaha, Neb., refused to confirm or deny the report.

Baptist Hospital spokesman John Pounds said the dead man was David Livingston, a 21-year-old sergeant assigned to the 308th Missile Installa-



tion and Maintenance Squadron at Little Rock Air Force Base. Pounds said he died because he "breathed a toxic solution of some kind" and was hit by rocks in the explosion.

At a Pentagon briefing, Mark confirmed heavy damage was done to the first and second stages of the missile, but he refused to discuss the warhead. Mark said some of the "harder"

components of the missile had survived relatively intact — the rocket engine and certain support struts — but the shell of the rocket had been charred by explosions in both stages.

Mark said the force of the blast shattered a heavy concrete door atop the silo, leaving a crater approximately 250 feet wide. The mouth of the silo normally is about 50 feet

wide.

About 1,400 people were evacuated from communities up to 10 miles away during the night when the leak started in the 155-foot-deep silo in a remote area about 52 miles north of Little Rock. At 3 a.m., about seven hours after the leak was first discovered, the silo blew.

The evacuees were allowed to return Friday afternoon.

President Carter in Washington said he had "stayed in close contact" all morning with Defense Secretary Harold Brown about the accident.

"We deeply regret the casualties from the explosion," Carter said. "The situation is under control and there is no indication of any radioactivity at all."

Dwight Whitcher, a field inspector with the Department of Pollution Control and Ecology, was half-asleep in his car at the entrance to the silo when the blast came.

"I looked over to the silo and it was a huge boiler fire," Whitcher said. "It looked something like Roman candles. I've never in my life been as scared."

Steve Taylor, a reporter for the Arkansas Democrat, hit the ground.

"All of a sudden the whole area was light," Taylor said. "I thought this is where I would die."

Taylor said debris from the blast fell to

earth up to a quarter of a mile away.

"One of the problems in terms of getting back in there (in the silo) is we don't know all the fuel has exploded," Mark said. "There may be pools of fuel lying down at the bottom somewhere, but the major danger of some kind of an explosion is over."

Gov. Bill Clinton said Air Force officials told him no nuclear explosion occurred and none could have occurred in the silo.

Lt. Col. Richard Stevenson, a SAC spokesman, would neither confirm nor deny there was a nuclear weapon aboard the missile, but said it is impossible to activate a nuclear device until the missile is launched.

It was the second accident this week involving sophisticated Air Force weaponry. On Monday, a B-52 bomber caught fire at Grand Forks Air Force Base in North Dakota. State disaster officials said an intercepted Air Force message indicated the plane may have been carrying nuclear weapons, but SAC refused to confirm that was so.

Mark said the missile, the nation's largest ICBM with a range of 6,300 miles, was undergoing maintenance Thursday night when a three-pound wrench socket fell, bounced off a thrust mount, and struck the missile, puncturing the ¼-inch aluminum of the first-stage fuel tank.

Air Force Secretary Says:

Blast No Public Nuke Threat

WASHINGTON (UPI) — Air Force Secretary Hans Mark Friday called the Arkansas Titan missile explosion "pretty much the worse case" of what could happen but insisted it raised no nuclear threat to the surrounding area.

"There is absolutely no

evidence of any radioactive debris anywhere in the area," Mark told a Pentagon press conference. "I can tell you that with absolute assurance.

"What you saw is pretty much the worst case of what could happen," Mark said.

More than 20 Air Force

personnel were injured in the explosion, one critically, Mark added. No one was killed.

The explosion, however, crushed the 750-ton concrete door which covers the silo in which the Titan missile was housed.

Mark said the explosion, caused by the ignition of fuel in the missile's two stages, and blew out a crater at ground level several times the width of the 40-foot diameter silo.

Mark said he still does not have definitive information on the explosion but he indicated what remained of the missile was a charred hulk. The engines and other hard

elements, he speculated, might be "recognizable."

Mark gave this chronological sequence of events:

Maintenance crews were transferring fuel into the second stage of the Titan II missile Thursday night when one of the workers dropped a wrench. The tool ricocheted off the bottom of the silo wall, into the side of the missile's first stage.

The impact caused a small puncture, and the highly volatile hydrazine fuel began to escape.

The maintenance team almost immediately noticed toxic fumes and evacuated while the missile crew detected evidence of fire and

washed down the missile with 100,000 gallons of water.

The water, however, did not put out the fire and fuel continued to spew into the silo, mixing with air.

When mixed with a certain proportion of air, the highly volatile fuel ignites spontaneously.

An emergency team entered the silo with measuring equipment only to find the fuel-air mixture to be highly explosive.

They, too, evacuated.

After they did so the explosion went off about 2:30 a.m. EDT, consuming the fuel of both rocket stages.

One killed, 21 hurt in silo explosion

DAMASCUS, Ark. (AP) — An underground Titan II missile silo housing a nuclear warhead exploded "like Roman candles" in rural Arkansas on Friday after a workman dropped a wrench socket that punctured the missile's fuel tank. One worker died and at least 21 others were injured, but Pentagon sources said no damage occurred to the warhead and Air Force officials said no radiation escaped.

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mand in Omaha, Neb., refused to confirm or deny the report.

Baptist Hospital spokesman John Pounders said the dead man was David Livingston, a 21-year-old sergeant assigned to the 308th Missile Installation and Maintenance Squadron at Little Rock Air Force Base. Pounders said he died because he "breathed a toxic solution of some kind" and was hit by rocks in the explosion.

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the leak started in the 155-foot-deep silo in a remote area about 52 miles north of Little Rock. At 3 a.m., about seven hours after the leak was first discovered, the silo blew.

The evacuees were allowed to return Friday afternoon.

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Lt. Col. Richard Stevenson, a SAC spokesman, would neither confirm nor deny there was a nuclear weapon aboard the missile, but said it is impossible to activate a nuclear device until the missile is launched.

Mark said the missile, the nation's largest ICBM with a range of 6,300 miles, was undergoing maintenance Thursday night when a three-pound wrench socket fell, bounced off a thrust mount, and struck the missile, puncturing the ¼-inch aluminum of the first-stage fuel tank holding about 10,000 gallons. A SAC spokesman said a maintenance worker had

dropped the tool. About 24 minutes later, the workers reported indications of a fire, Mark said, and flooded the silo with water. Civilian authorities were advised to evacuate the area.

The four members of the silo launch crew were evacuated by helicopter before the explosion to the Little Rock Air Force Base, about 40 miles away, Mahr said.

The maintenance crew had suited up to enter the silo only 30 minutes before the blast. It was not immediately known whether they were inside the silo at the time of the explosion.

All told, the United States has 54 of the Titan II ICBMs in 54 silos under the jurisdiction of three Air Force bases in Arkansas, Kansas and Arizona.

The missile is 103 feet tall and 10 feet in diameter. Loaded and ready to be launched, it weighs 330,000 pounds. It is propelled by a mixture of a fuel and an oxidizer which ignite on contact with each other.

It can carry a 24-megaton nuclear warhead — many times the power of the bomb that was dropped on Hiroshima and ended World War II.

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AIR FORCE WON'T ADMIT NUCLEAR WARHEAD STORY

"Most powerful in U.S. arsenal?"

DAMASCUS, Ark. (AP) — The Air Force Saturday would neither confirm nor deny reports that a nuclear warhead was blown out of the underground silo in an explosion at a Titan II missile site that killed an Air Force sergeant and injured 21 other maintenance workers.

But 1,400 people evacuated from their homes in this rural area about 50 miles north of Little Rock were allowed to return to their homes late Friday after officials said no radioactivity was detected in the area.

Pentagon sources on Friday told The Associated Press there was a nuclear weapon atop the missile, which is designed to destroy a city more than 6,000 miles away.

Several newspapers and at least two television networks Saturday quoted sources as saying the warhead was thrown from the silo in the pre-dawn explosion Thursday but was found intact a short distance away.

The Omaha World-Herald quoted sources who said the 103-foot missile was destroyed and that some damage was done to the warhead, but there were no radiation leaks.

The Arkansas Gazette said the silo housed a 10-megaton warhead, "the most powerful in the United States arsenal," that was thrown from the silo but not damaged.

Similar reports appeared in the Washington Post, the Memphis Commercial Appeal, and the New York Daily News and broadcast on NBC and ABC.

An Air Force spokesman this morning said he could neither confirm nor deny the reports, the customary response to questions about accidents involving nuclear weapons.

Strategic Air Command officials were continuing an investigation of the accident and the extent of the damage Saturday. Both stages of the 165-ton missile were heavily damaged, the Air Force said.

But Air Force Secretary Hans Mark stressed, "There is absolutely no evidence of any radioactive material in the area. I can tell you that with absolute assurance."

The blast at about 3 a.m. near this central Arkansas community shattered the silo's 750-ton steel-and-concrete lid, spewing table-size chunks of twisted steel and concrete into the air and injuring a total of 22 airmen, two seriously. A 60-man Air Force emergency response team was above ground near the silo at the time.

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One injured man, Sgt. David Livingston, 22, of Heath, Ohio, died Friday after he "breathed a toxic solution of some kind — that was the fatal blow," according to hospital spokesman John Pounders at Baptist Medical Center in Little Rock.

It was the third fatal accident at a Titan II silo. In 1965, 53 civilian workmen were killed in a silo near Searcy, Ark., when a welder's torch touched a line carrying a combustible fluid. In 1978, two airmen were killed when a leak led to the escape of a cloud of toxic gas near Rock, Kan.

A leak at the silo near Damascus occurred in January 1978, but the missile itself did not leak then, the Air Force said.

The events leading to the blast began Thursday when a workman dropped a 3-pound wrench socket that punctured a fuel tank in the first stage of the missile, authorities said.

When vapor from leaking fuel was spotted, a four-man launch crew began releasing 100,000 gallons of water stored in a tank, said SAC spokesman Capt. Tom Mahr. The crew then left the building, and residents from surrounding towns as far as 10 miles away were evacuated.

Just after emergency team members left the silo, a blast seen 20 miles away left a smoking crater 250 feet wide, five times the normal size of the mouth of silo. The pastureland around the compound was littered with concrete and steel debris.

"There was a giant flame that went up about a couple of hundred feet. As it started to arc back down, the ground started rumbling. There were two extremely loud explosions, and then it was like a fireball rose up from the silo. The sky was all red," said state trooper Robert Hill, who was 1½ miles away at the time of the explosion.

The Air Force has 54 Titan II silos in Arizona, Kansas, and Arkansas. Each state has 18 of them. The 155-foot silo is made of steel, concrete, and lead, a SAC spokesman said. The rocket, the nation's most powerful intercontinental ballistic missile, is supposed to be able to carry a 24-megaton warhead to targets 6,300 miles away.

The SAC spokesman said he did not know the cost of a silo or a Titan II missile, nor the monetary loss from the explosion at the silo about 3¼ miles north of Damascus. He said he did not know who dropped the socket. "We couldn't release that information if we did," said Capt. Curtis Hawker, a SAC spokesman in Omaha.

Officials Shun Nuclear Issue in Titan Blast

Mystery Surrounds Warhead Question in Arkansas Explosion

By BILL CURRY

Times Staff Writer

DAMASCUS, Ark.—Amid growing evidence that a nuclear warhead was blown out of its isolated launching silo here, Air Force officials Saturday maintained a stony silence as to just what happened to one of America's most powerful warheads after an explosion Friday in a Titan II missile facility.

"Any information about the weapon?" crackled a military radio transmission early Friday morning, as recorded by the Arkansas Gazette.

Negative, we have no information at this time. I doubt very seriously if anyone has really looked for it. We still have some people here. We can go back and take a look."

I will not go beyond what the Secretary of the Air Force (Secretary Hans Mark) said yesterday said Lt. Gen. Lloyd R. Leavitt Jr. in refusing Saturday to discuss the presence or whereabouts of any nuclear warhead. Leavitt made his comments at an afternoon press conference called at the Little Rock Air Force Base here. A press conference threatened to terminate if reporters kept asking questions about nuclear warheads.

'Explored Outer Limits'

Such was the mystery surrounding Friday morning's incident, or so severe that Leavitt himself said "explored the outer limits" of Titan II safety procedures.

He called it a "worse case" catastrophe that left Damascus residents knowing far less than Europeans did years ago when the United States lost its nuclear bombs at Palomares.

So contentious and absurd had Saturday's inquiries into the incident become that reporters asked questions that were openly answered in Air Force press releases. But so secretive was the Defense Department over the presence or absence of nuclear warheads that Leavitt refused to confirm or deny the information contained in the Air Force's own handouts.

Meanwhile, 11 more airmen were released from the hospital Saturday, leaving six injured men hospitalized. Four airmen had previously been treated and released.

1 Killed, 21 Injured

In all, one man was killed and 21 Air Force crew members were injured in the explosion early Friday of the missile in its roadside silo here. The victim was identified as Sgt. David Livingston, 22, of Heath, Ohio.

The missile's quarter-inch aluminum skin had been punctured at about 6:30 p.m. Thursday when an unidentified airman dropped a three-pound wrench socket that fell 70 feet, ricocheted off a thrust mount and then pierced the Titan II first-stage fuel compartment.

After indications of a fire, the silo was flooded with 100,000 gallons of water, but later in the dead of night, two Air Force sergeants

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Officials Sidestep Issue of Warhead

made a high-risk adventure into the bowels of the nuclear missile silo. It was nearing 3 a.m. and their mission was to find out whether the crippled Titan II missile, known only as No. 374.7, was about to explode.

Chased from the silo's control room by toxic propellant fumes, they retreated, but no sooner had they returned to the earth's surface when a powerful orange and red fireball erupted from the silo, killing one of them and critically injuring the other.

That was only the beginning of the fear and confusion that marked Friday's explosion, a blast that destroyed one weapon in America's most powerful intercontinental ballistic missile arsenal.

Even though state and federal officials swept the area repeatedly for any radioactivity, Leavitt, as Mark had done Friday, refused to say whether there was a nuclear warhead on the destroyed Titan missile and if so, what had become of it.

Leavitt did say he had toured the site of the Titan explosion and that he looked into the silo "where the missile used to be."

Missile and Silo Both Destroyed in Blast

He said the missile and the silo were both destroyed. And he praised the courage of the dead and of the others who were injured, but he refused to answer the only questions anyone here really wanted answered:

"Was there a warhead?"

"If so, where is it?"

In Damascus (population 255) the destruction of the missile brought a sort of ghoul relief.

"We won't ever have any more trouble with that one now," Kenny Lee, 32, who sells semen for artificial cattle breeding. In January, 1978, a storage tank at the same missile site leaked toxic fumes over this central Arkansas community, forcing the evacuation of hundreds of people.

Lee said that early Friday morning when he heard of the explosion he put "the kids in the car and headed for north Arkansas," where his father has a farm that contains caves where, Lee thought he would be safe from any radioactive fallout from the missile explosion.

"The Russians quit targetting that one yesterday," said Stephen Carrell, 37, a small-scale cattle rancher here. "That gives them two missiles for somewhere else.

"I don't think it will ever be used again."

Too Early to Know Future Status

Indeed, Leavitt said it was too early to tell whether the missile site here would be reactivated in the future or abandoned as a disaster.

The ruined Titan II facility was one of 18 missile sites scattered across central Arkansas. They were welcomed by local residents in the early 1960s but "we didn't think about them again until 1978," said Carrell. "Then came yesterday; 1978 was the first time we knew it was dangerous."

"As of now, it's useless," said a Little Rock Air Force Base spokesman of the missile site.

"I don't feel that they'll be building it again," said Mrs. Richard Turner, who has a farm within a mile of the missile site. "The fumes (from the propellants) we did worry about. But my fate was in God's hands.

"It's scary. I feel right now like I've been on a terrible hangover. But I don't think I want it there. There are plenty of places out in the middle of nowhere for it."

In response to those who expressed fears about the presence of such missile sites, Leavitt said, "I think we had about the worst case we could have with a Titan missile. Now that we've seen the limits, there were no

civilian injuries, no damage beyond the perimeter and no radiation at the site."

Leavitt said that the series of events that led to Friday's explosion began when the wrench socket fell through a rubber collar during routine maintenance. He said it was maintenance performed shortly after refueling of the missile's second stage a few days earlier.

There was an initial fuel leak and hours later a crew entered the underground network of chambers and passageways to ascertain the extent of damage and the threat of a possible explosion.

One crew made an initial foray into the underground chambers but had to return to the surface after their oxygen ran out.

It was then that the second crew descended into the complex with instructions to return to the surface if readings of toxic chemicals were excessive.

They were.

The two men in the second exploration mission, Livingston and Sgt. Jeff Kennedy, had just emerged when the explosion occurred.

Livingston died and Kennedy was listed in critical condition.

Leavitt called them "unfortunate victims of terrible bad luck."

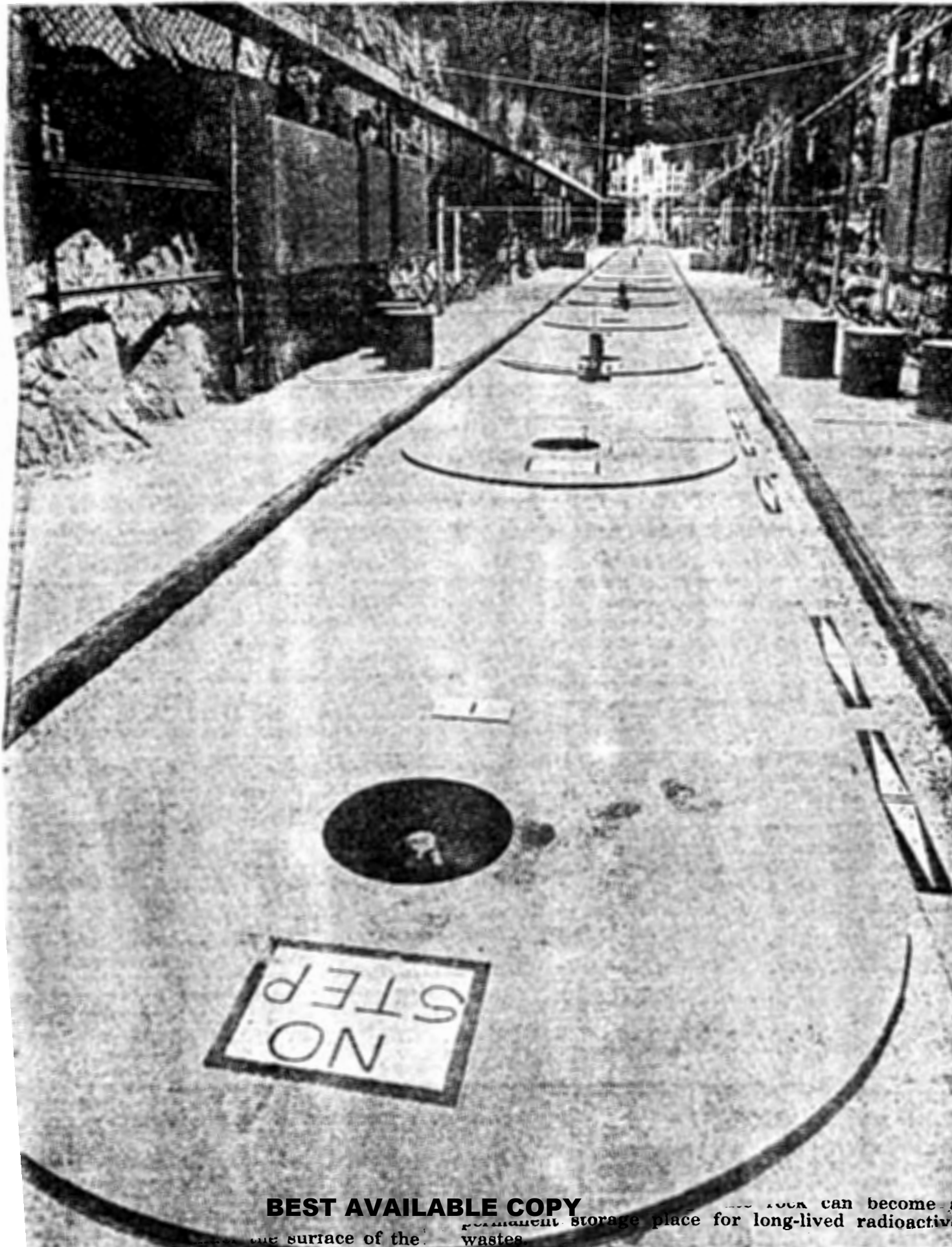
Leavitt defended the security of the Titan II bases, saying that although the silo site was destroyed by an explosion of the missiles' own fuel, it could still withstand a direct nuclear attack, as it was designed to do.

He said the doors on the silo site weigh 740 tons and that there is no reason to believe that the Titan missile facilities could not fulfill their mission.

Leavitt, the most senior Air Force official who has visited this Damascus site, said that some areas of the silo facility had not yet been entered.

While refusing again to comment on the presence of a warhead, Leavitt said "there is absolutely no evidence of any radioactive debris anywhere in the area."

He said that both Air Force and Department of Energy officials had combed the area to look for radioactivity and had found none.

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...the surface of the ... rock can become a permanent storage place for long-lived radioactive wastes.

... are conducting a \$25 million experiment

By Ed Vogel
R-J Staff Writer

MERCURY — The Nevada Test Site has been the scene of 84 above-ground and more than 500 underground nuclear weapons tests since becoming America's prime nuclear testing ground in 1950.

Yet its 1,350 square miles show little sign of the atomic intrusions of man. Occasionally a guide will point out a crater made by a nuclear explosion. Later visitors drive past the decaying remains of the Yucca Flat bleachers where newsmen gathered to record first-person accounts of the blasts of the 1950s.

But 30 years after mushroom clouds first climbed toward the Nevada sun, the Test Site remains a barren, inhospitable land that only grizzled prospectors could love. The rusting remains of wrecked automobiles illustrate man's haste to leave the place. Few men or creatures would want to call this rocky, sagebrush-covered terrain home.

On this day, however, a nearly tame coyote strolls up to the small crowd gathered in the shadows of huge boxes and crates containing tons of nuclear wastes. The group stands in the bottom of a 700-foot-long ditch, part of a 92-acre dump where the Test Site stores its low-level nuclear wastes.

Both high-level and low-level nuclear wastes have been stored for decades at the Department of Energy-managed Test Site without any of the leaking container incidents which regularly disrupt operations at the private dumpsite 35 miles away near Beatty.

"The only infractions we have had are paper screwups," said Dave Jackson, the DOE's chief spokesman. "We haven't had the kind of infractions you have at Beatty."

Nuclear wastes produced at the government's Rocky Flats bomb-manufacturing plant in Golden, Colo., and in experimental weapons laboratories at places like Los Alamos, N.M., and Oak Ridge, Tenn., regularly are shipped to the Test Site for disposal. The government's nuclear wastes are subject to the same Department of Transportation and Nuclear Regulatory Commission rules that affect commercial wastes.

See SITE,



CHECKING FOR RADIOACTIVITY - Monitor James Carter checks if radioactivity is coming off these barrels of nuclear waste in the Nevada Test Site's nuclear waste dump. On this day,

Carter found more radioactivity was emitted from a bystander's luminous watch.

R-J photo by Gary Thompson

SITE

However, since the DOE supervises the packaging of wastes bound for Mercury, officials say there's little chance for shipping problems.

"We are in a position to watch it being packaged," Jackson said. "We retain control at both ends. A guy is right there and he signs everything off. If anything happens, he is held accountable."

Though the Test Site may not accept shipments of private nuclear wastes, the items buried in its nuclear dump are similar to what is found in the Nuclear Engineering Co.'s dump near Beatty. Among the 80,000 cubic feet of wastes are test tubes, rubber gloves, chemical rags, protective clothing, contaminated soil and tools.

"Natural, background radiation is higher than what we read on the oxes," said Eugene Kendall, the Reynolds

Electrical and Engineering Co. employee who manages the Test Site dump.

This dump has been mentioned as a place where private companies may ship nuclear wastes if the Nevada Board of Health decides to close the Beatty dump in an Oct. 22 meeting. Attorney General Richard Bryan has demanded the dump be closed in order to protect future generations of Nevadans.

Yet even if the nation's three commercial nuclear dumps were shut down, Jackson predicted it would be several years before it would be necessary to store private wastes in government dumps. Since it is DOE policy to seek "concurrence" from Nevada on nuclear waste storage, commercial nuclear wastes may never be shipped to the Nevada Test Site, he said. The Nuclear Regula-

tory Commission, however, has been considering a plan to use the Test Site and other government facilities for alternative dumpsites if the private nuclear dumps are closed. Gov. Robert List has urged governors of each state to open dumps to contain the hazardous wastes created in their borders. To cut down on the long distances nuclear wastes are hauled, the government would prefer at least the establishment of regional dumps, Jackson said.

Storage of private nuclear wastes at the Test Site "would be a last resort," he added. "In the event that industry couldn't do anything and wastes piled up and became a hazard, then somebody would have to do something."

"As long as the container containing the wastes remains intact, you could store it in a garage," said Dave Mil-

er, another DOE publicist.

"Hazardous waste storage is a long-term problem which must be solved by industry and the states," Jackson added. "The concept of the Test Site becoming the radioactive dump of the world just isn't viable."

How to handle the nation's low-level commercial nuclear wastes isn't a question now being answered at the Test Site. Yet finding a permanent way to store the high-level wastes generated by private nuclear reactors is the subject of a \$25 million Test Site experiment.

Since last year, radioactive fuel elements from a commercial nuclear reactor at Turkey Point, Fla., have been going through storage experiments at the Test Site. Most of the radioactive elements are stored in steel-encased holes in a concrete

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tunnel 1,400 feet below the earth near the site of the old Climax mine.

From the experiment, the Department of Energy hopes to learn if granite rock would be an acceptable place for the permanent storage of highly radioactive wastes.

Smaller amounts of the spent fuel elements are stored in a 95-ton concrete silo next to the Test Site's E-MAD (for Engine Maintenance, Assembly and Disassembly) building at Jackass Flats. Other fuel rods are hidden nearby in steel containers lowered 25-feet below the surface of the ground.

"We are demonstrating wastes may be stored in a safe and acceptable manner," said Tony Haki, the Westinghouse employee who manages the E-MAD facility. "So far everything has gone as predicted."

What decision the federal government makes on permanent storage of radioactive wastes will "be a political one," Haki added.

More than 7,000 tons of nuclear wastes now are being stored in cooling water pits near the nation's private nuclear power plants.

"Some point in 10 years or so the power plants are going to be out of space," Jackson said.

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Highly radioactive canister recovered

NEWARK, N.J. (AP) — A canister containing radioactive Radium-192 that fell from a truck onto a busy New Jersey highway was recovered Saturday after a 14-hour search by federal nuclear officials, state environmental crews and local police, authorities said.

"It was probably moments away from a major alert when we found it," said Loretta Brennan, a spokesman for the state Department of Environmental Protection.

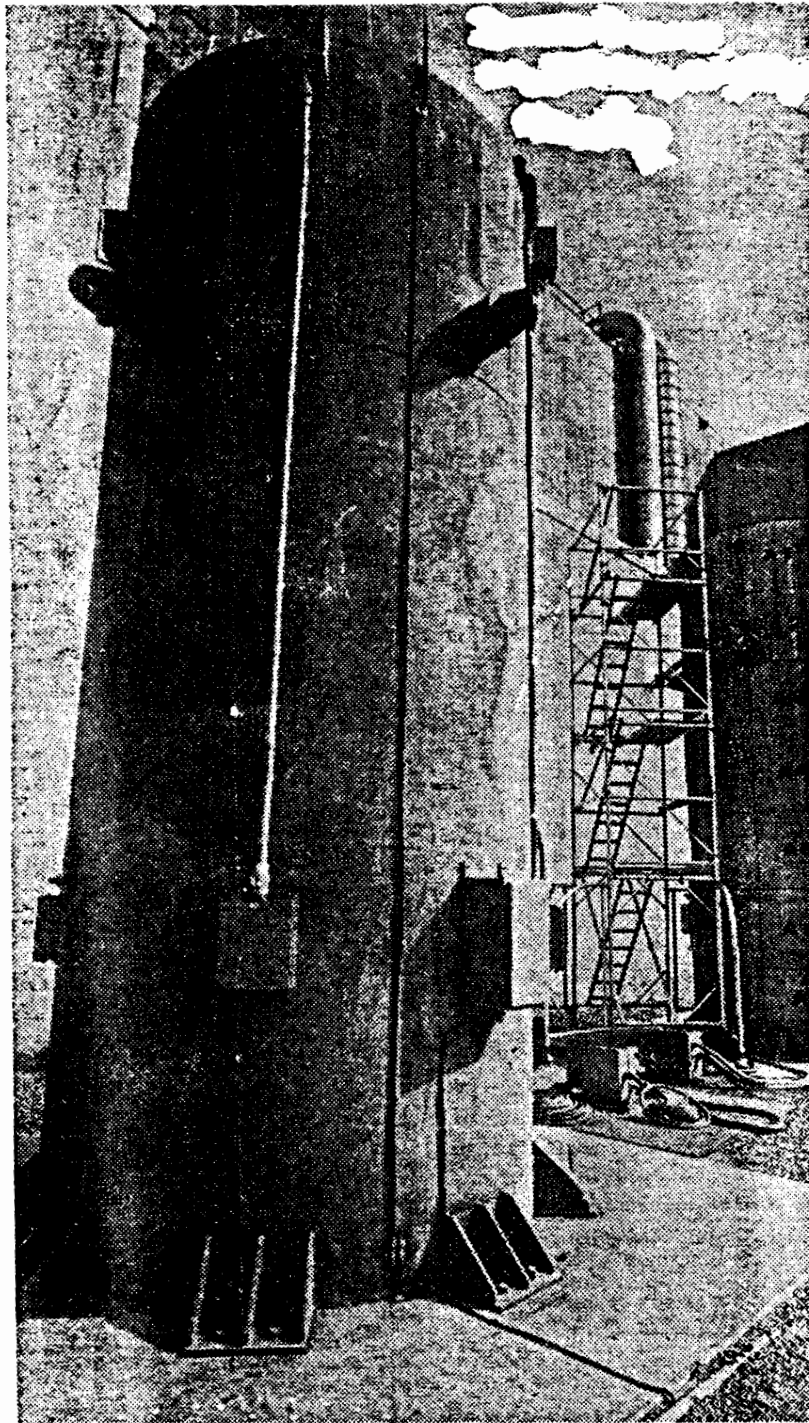
The canister, had it been opened, would have posed dangers, according to police. Radium-192 is a by-product of hospital X-ray techniques, Brennan said.

The canister was one of two that fell from a truck transporting the radioactive substance from Jersey City. The destination of the vehicle, owned by the Smith Transfer Co., was unknown, Brennan said.

About 2 a.m. Saturday, police recovered a canister of Radium-192 after it was hit by a car in the northbound lanes of Route 17.

Authorities tracked the Smith vehicle and learned three canisters had been loaded but only one remained on the truck.

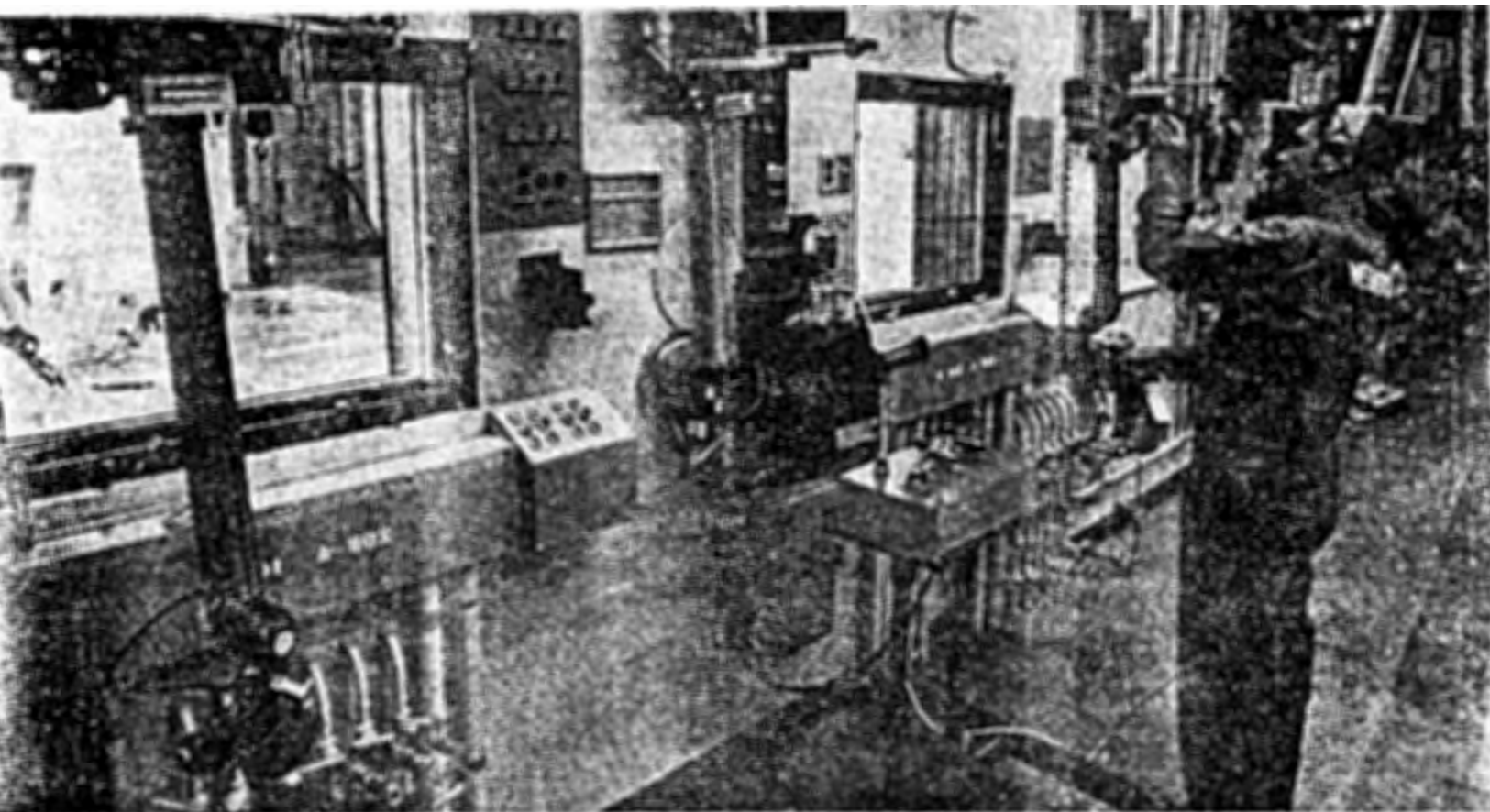
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NUCLEAR SILO - Highly radioactive wastes from nuclear reactors are hidden inside this 95-ton concrete silo outside the Nevada Test Site's E-MAD building. Scientists want to learn if the silos are an effective way to store nuclear wastes permanently. The E-MAD facility is where experiments once were conducted on nuclear rocket engines.

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THE HOT ROOM — A Nevada Test Site technician operates the calibers which permit the manipulation of highly active nuclear wastes contained in the inner room. The lead-lined windows to this inner hot cell

are five-feet thick. Three experiments to find a way to permanently store high-level nuclear wastes are being conducted at the Test Site.

R-J photos by Gary Thompson

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Nevada Test Site



**Storing nuclear waste
in the barren land
of the testing ground**

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U.S. plans study on fallout effects

WASHINGTON (AP) — The federal government will sponsor \$4 million in radiation research in Utah, Nevada and Arizona in an effort to resolve still-unanswered questions about the health effects of radioactive fallout from nuclear weapons tests, Health and Human Services Secretary Patricia Roberts Harris said Monday.

Five federal agencies will underwrite the research to be carried out by scientists in the three states, she said.

The contracts have not yet been let, but the government plans to begin talks promptly to set up

the research agreements, according to Dr. Donald S. Fredrickson, director of the National Institutes of Health and chairman of the Interagency Radiation Research Committee.

Along with NIH, sponsoring agencies are the departments of defense and energy, the Veterans Administration and the Environmental Protection Agency.

Nuclear weapons were exploded in the atmosphere in tests in the southwestern United States for two decades after World War II, and experts are still seeking to answer concerns about the effects

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on the population.

In announcing the research plans, the Department of Health and Human Services said in a statement:

"Studies in the early 1960s were inconclusive regarding possible relationships between radioactive fallout patterns and the occurrence of thyroid tumors and leukemia in southern Utah. Further studies of childhood cancer patterns reported by the University of Utah in 1979 were likewise inconclusive, although they suggested possible relationships with respect to leukemia."

The federal Center for Disease Control has a

continuing contract with the University of Utah on those leukemia studies.

The Interagency Radiation Research Committee, which was set up last March and is made up of top officials from all federal agencies dealing with radiation research and regulation, had proposed sponsoring the \$4 million in studies through individual contracts with scientists.

The universities of Utah and Nevada and the Arizona Department of Health Services had submitted proposals to extend the earlier work in the three states.

Hatch Offers Change in Method of Fixing Amounts for Radiation Compensation

By George Raine
Tribune Staff Writer

One year after he introduced the Radiation Exposure Compensation Act of 1979 in the United States Senate, Utah's Sen. Orrin G. Hatch has decided to rewrite some of its critical language, the very means by which compensation might be awarded.

Sen. Hatch will amend the bill so that awards, if they are to be given to so-called exposure victims or their survivors, would be determined via a workmens' compensation-like schedule. "It would be a satisfactory, moderate recovery, but it would not allow recoveries to the moon," Sen. Hatch said in an interview.

The plan might also be met with opposition, for a companion measure in the House, sponsored by Rep. Gunn McKay, D-Utah, has its strength, says its sponsor, because the amount of damages and the eligibility of claims is left in the hands of the federal court.

Courts Equipped

"This is proper because the court system is equipped to deal with each claim individually and award damages that are much more appropriate to each case than would be the case through reliance on a standard compensation schedule," said Mr. McKay.

This is undesirable, said Sen. Hatch, the Republican, who said he fears gross injustices in the form of "whopping awards or no awards" granted by juries, as would be provided through his own bill as it is now written.

The bill, cosponsored by Sen. Edward M. Kennedy, D-Mass., would make the United States liable for damages to certain persons who were downwind from Nevada Test Site atmospheric nuclear detonations in the 1950s and early 1960s, and to certain uranium miners and also owners of sheep herds affected by test fallout.

Mammoth Litigation

This is the subject of mammoth litigation, too, in the form of a multi-plaintiff lawsuit in U.S. District Court for Utah. There are about 700 plaintiffs in the suit which, under court rules, must proceed; it is in the discovery phase now and has a September, 1981, trial date.

Although introduced a year ago, Sen. Hatch still has the luxury of time for rewriting the bill, for it remains within the Committee on the Judiciary and Labor and Human Resources.

It was in July of 1979 that Rep. McKay introduced his measure to compensate so-called military and civilian victims of radioactive fallout. While it has been reported out by one subcommittee, the measure is in the House subcommittee on administrative

law and government relations. Its chairman, Rep. George E. Danielson, D-Calif., has promised Mr. McKay hearings as soon as they can be scheduled — but that means early 1981.

Sen. Hatch proposes that the United States shall be liable for damages to an individual who resided in an affected area for a period of one year between Jan. 1, 1951, and Oct. 31, 1958, or who resided in an affected area between June 30, 1962, and July 31, 1962, and who after Jan. 1, 1952, died from, has or has had leukemia, thyroid cancer, bone cancer, or any other cancer that would be identified by a special advisory panel created by the bill.

Ask Counties

"Affected area" here means the Utah counties of Millard, Sevier, Beaver, Iron, Washington, Kane, Garfield, Piute, Wayne, San Juan, Grand, Carbon, Emery, Duchesne, Uintah, Sanpete and Juab. It also means the Nevada counties of White Pine, Nye, Lander, Lincoln and Eureka (but not the populous Clark County of the Las Vegas area), and it means that part of Arizona north of the Grand Canyon and west of the Colorado River.

The Hatch bill would further cover any other area in the United States determined by the secretary of the Department of Health and Human Services to have received a high level of fallout as a result of the nuclear detonations at the Nevada Test Site between certain dates.

Not Responsible

Sen. Hatch said he remains comfortable with that and other language in the bill, but thinks bill is less than fiscally responsible.

The Hatch bill is drawn actuarially in the sense that, for the purposes of recovery, an advisory panel would identify suspect radiation-related diseases. This means those types of cancers, besides leukemia, thyroid cancer or bone cancer, that are more likely than other cancers to develop in human beings after exposure to low-level radiation.

The panel would also name those diseases, other than lung cancer and pulmonary fibrosis, that are more likely than other diseases and illnesses to develop in humans who worked in uranium mines between certain years.

Possible Defect

"But the compensation (issue) may be a defect in our bill," said Sen. Hatch.

"We don't want some to get huge awards and others who are just as deserving to get a pittance. Rather, we should have a moderate approach to the problem, where we make sure awards are reasonable across the board.

"I don't want the taxpayer ripped off, but I think the government owes it and ought to pay for it," said Sen. Hatch.

More Reasonable

"The McKay bill is more or less a negligence bill leaving it wide open who gets what, and I would go with that if that's all we can get, but would prefer a more reasonable compensation basis.

"By necessity, there will be people who will not recover what they should and there will be some who will recover whose cancer did not come from the atmospheric tests," said the senator.

An award schedule might be appropriate if it were not in the relative pittance range Sen. Hatch alluded to, said one attorney close to the radioactive fallout case.

Better Plan?

Perhaps it would be more appropriate, the lawyer said, to establish a claims panel that could hear evidence and attempt to work within a schedule to make awards that would be subject to an appeal to the U.S. District Court.

The anonymous lawyer, a spokesman for a number of persons who allege an exposure-cancer cause-and-effect relationship, added, "I would rather have someone familiar with such awards look at them and not have the last resort be an administrative body."

One of the lawyers in the 700-plaintiff case is Dale Haralson of Tucson, Ariz., who said, in terms of the Hatch bill, that the court seems the proper arena for award decision-making because losses will vary between claims and the court is equipped for that problem.

Meanwhile, the states of Nevada, Utah and Arizona have yet to hear a decision on a request for \$17 million from the National Institutes of Health to study the effects of nuclear fallout on citizens during the above-ground testing period.

And in Washington, Sen. Hatch said the momentum behind his bill is "a building thing." He added, "A lot of people really aren't concerned," about this public health matter that has preoccupied Utahns for years.